

**CAPITA SYMONDS**



**NetServe Framework**



**Reduced Energy Lighting – White Light Sources**

**Initial Site Deployment Lessons Learnt Report (Product ID 3)**



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## **1 INTRODUCTION**

### **1.1 General**

This document has been produced under the scope of Highways Agency NetServe Task 399 (1308)ARPS, "Reduced Energy Lighting – White Light Sources", Work Package (WP) 0000, Project Management.

This document details the lessons learnt from the Initial Site Deployment (ISD) of Reduced Energy White Lighting on the M4 between Junctions 5 and 6.

### **1.2 Background and scope**

Following a review of Capita Symonds Safety Argument (Product ID 04) the ISD gained HA approval to proceed in February 2011.

A 2.2km section of the M4 between Junctions 5 to 6 (MP 32/3 to 34/5) was selected as an ideal site for the ISD due to meeting the site selection criteria as detailed in Capita Symonds ISD Capability Assessment (Product ID 11) e.g. existing lighting provision, "normal" accident rates etc.

The ISD was successfully deployed by Area 3 MAC over a five day period between 28<sup>th</sup> March and 1<sup>st</sup> April 2011.

The objective of this document is to detail the lessons learnt from our experience with undertaking the ISD and efficiencies that could be made in future deployments of a similar nature and carried out on behalf of the Highways Agency.

### 1.3 M4 site photographs

The photographs below were taken from Riding Court Road M4 Overbridge and show the lighting before and after the ISD.



Figure 1.3.1 – Existing 250W SON installation (before ISD)



Figure 1.3.2 – New 140W Cosmo installation (after ISD)

## 2 LESSONS LEARNT

The lessons learnt are included in this section and have been broken down by activity (Procurement, Planning and Installation).

### 2.1 Procurement

Ref	Title	Detail	Lesson learnt
2.1.1	Luminaire optical settings	The luminaire manufacturer set the optical setting of the luminaires in the factory prior to shipping to site.	This provided a time saving compared to the MAC performing this activity.

### 2.2 Planning

Ref	Title	Detail	Lesson learnt
2.2.1	Staff continuity	Aided by the short duration of this Task the same staff were involved for its duration.	Staff continuity allowed the programme to be accelerated and provided a higher quality output.
2.2.2	MAC continuity	The Area 3 MAC were invited to the Off-Road Demonstration of the white light and were therefore more susceptible to accepting this on their network.	Less important for future rollouts of white light but MAC continuity throughout the Task should be considered when trialling new technology.
2.2.3	MAC co-ordination	Meetings with the MAC were held to keep them abreast of Task progress and issues.	Keeping the MAC well informed and working as a team provided a good working relationship and positive outcome.
2.2.4	Fast-tracked programme	The programme was fast tracked to allow just seven weeks to plan and deliver the ISD (following HA approval to proceed).	Although the ISD was successful a three month period would have been more comfortable to allow more time for procurement (this had to be accelerated) and roadspace booking.
2.2.5	Conflicts	Although we had a roadspace booking for week commencing 21 <sup>st</sup> March 2011 this was cancelled due to adjacent works (dimming trial) overrunning their programme. This caused a one week delay to our programme.	Although we were aware of the adjacent works and their programme we did not have a point of contact with the Project Lead and therefore we did not receive progress updates. Regular communications with adjacent schemes would have provided an early warning to potential conflicts / delays.
2.2.6	Financial management	The MAC were not forthcoming in providing spend profiles or invoicing	The MAC need to invoice and update their CORE form monthly to

	of MAC	on time.	allow visibility of spend. Especially important as the year end approaches.
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### 2.3 Installation

Ref	Title	Detail	Lesson learnt
2.3.1	Time for Installation	<p>As the existing SON luminaires were to be retained (i.e. removed intact) the installation took longer than expected. Installations on the first two days were at a rate of 3 / hour, increasing to about 5 / hour thereafter.</p> <p>The slower installation time leads to increased installation costs and increased road worker exposure to traffic.</p>	<p>Existing SON luminaires were retained in the unlikely event that the ISD was unsuccessful and a reversion back to SON was required.</p> <p>Following the successful ISD (no issues or comments received to date) the retention of existing luminaires should be considered on future schemes i.e. the benefits of keeping the original luminaires available for re-instatement is unlikely to manifest itself based on the lack of response to this intervention to date.</p>
2.3.2	Power fault	Due to a power cable neutral failure several ballasts were blown.	Although the fault did not exist prior to the works, it is recommended that more spare ballasts are made available and cable stocks and glanding kits are assessed prior to the commencement of the works.
2.3.3	Isolator fault	As part of the installations works the isolator within one of the columns collapsed and became unusable, resulting in the column being inoperable.	Ensure that spare isolators are available to the installation team as part of the works.